ACEWELL ATV/Motorcycle Computer

ACE-325X/395X-XX series User's Manual

E13 10R-022812

www.acewell-meter.com English

Thanks for purchsaing an Acewell ATV/Motorcycle/Scooter computer. This manual is specifically designed for ACE-325X/395X-XX series. The ACE-325X does not have any extra LED indicator. The ACE-395X-XX series has 4-8 LED indicators. ACE-395X-XX has aluminum CNC cases and ACE-39XX has plastic housing. Different model has different LED indicators; all other functions are the same. You may find that the photo has a set of LED indicators different from your computer; the photo is for reference only.

PANEL DESCRIPTIONS

1. Tachometer Scale
2. Bar Tachometer
3. 1st row: Current & Max. Speedometer
4. 2nd row display: Other functions
5. RESET Button
6. MODE Button
7. Fuel Bar
8. Thermometer Bar
9. RPM warning Indicator
10. Temperature Warning Indicator

⇦	Left-Direction Indicator/Green		Engine Oil / Red
≡D	Main-Beam Headlamp/Blue	N	Neutral Gear /Green
⇨	Right-Direction Indicator/Green	R	Reverse Gear /Red
⚠	Hazard Warning/ Red	D	Drive Gear /Green
P	Parking/Green		Engine coolant temperature/ Red
⇦⇨	Direction Indicator/Green		Rear Fog Lamp/Amber
⇦1⇨	Trailer Flashers/Green		Engine "Not In Use"/Red

FEATURES

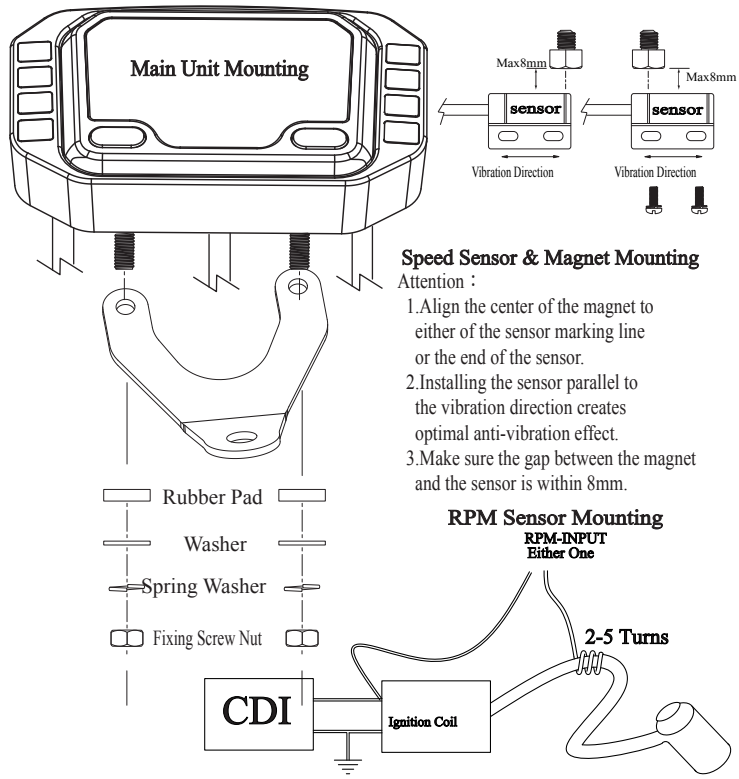
- Displays bar-graphic tachometers, speedometer, bar fuel meter, bar thermometer and one of other functions at the same time.
- Optional bar-graphic tachometer scale of 8,000rpm or 16,000 rpm for different bikes.
- Allows end user to adjust odometer when the odometer is less than 30 km, after that the odometer is always stored in memory even when the power is off.
- The main unit built-in 4-8 LED indicators for different purpose application.
- Three options fuel meter input resistance 100, 250 and 510£[are available.
- Universal speed sensing circuit for reed sensor and hall sensor.
- Includes bracket, RPM sensing wire, speed sensor, thermo sensor, fitting kits and wiring harness.
- Water resistance, vibration (10G) and mechanical shock (100G) resistances tested.

SPECIFICATIONS

FUNCTION	Symbol	SPECIFICATIONS	INCREMENTS	ACCURACY
Bar Tachometer		250-8,000 or 500-16,000 rpm	250/500 rpm	
Digital Tachometer	RPM	100-19,900rpm	100 rpm	
Shift Warning	RPM	100-19,900rpm	100 rpm	
Maximum Tachometer	MAX RPM	100-19,900rpm	100 rpm	
Speed Meter		2.3-300.0KM/h (187.5M/h)	0.1 KM/H or MPH	±1% or ± 0.1(KPH/MPH)
Maximum Speed Meter	MAX	MAX 2.3-300.0KM/h (187.5M/h)	0.1 KM/H or MPH	±1% or ± 0.1(KPH/MPH)
Average Speed Meter	AVG	AVG 2.3-300.0KM/h (187.5M/h)	0.1 KM/H or MPH	±1% or ± 0.1(KPH/MPH)
Trip Meter 1&2	TRIP 1&2	0.0-999.9 Km (624.9 Miles)	0.1 Km or Miles	±0.1%
Odometer	ODO	0.0 - 999999 Km (0.0- 624999 Miles)	1 Km or Miles	± 0.1%
Riding Time	RT	0:00'00"- 99:59'59"	1 Second	± 50PPM
Total Time	TT	9999H59'	1 Minute	± 50PPM
Clock		0:00'00"- 23:59'59"	1 Second /1 Minute	± 50PPM
Temperature	℃ /℉	+50℃-160℃/ 122 - 320℉	1℃/℉	± 1℃/℉
Max. Temperature	MAX	+50℃-160℃/ 122 - 320℉	1℃/℉	± 1℃/℉
Bar Thermometer		1-7 Bar-graphic		
Voltage Meter	V	8.0-25.0 Volt	0.1V	
Bar Fuel Meter		100, 250, 510Ohm or Off		

Power Input: 12VDC.
Speed Sensor: Reed Sensor or Hall Sensor
Tachometer Input: CDI or Ignition-coil signal.
Temperature Sensor: Thermo Sensor
Wheel Circumference setting: 1mm - 3999 mm (1 mm increment)
Operation Temperature: -10℃ - +80℃ (inner housing)
Storage Temperature: -25℃ - +85℃ (Inner housing)
Dimensions:130x78x30.5mm (ACE-395X-XX)
125x78x28.5mm (ACE-395X), 95.2x72x27mm (ACE-3250)

INSTALLATION & PARTS



Speed Sensor & Magnet Mounting

Attention：

1.Align the center of the magnet to either of the sensor marking line or the end of the sensor.
2.Installing the sensor parallel to the vibration direction creates optimal anti-vibration effect.
3.Make sure the gap between the magnet and the sensor is within 8mm.

RPM Sensor Mounting

1. Signal intensity from ignition coil is dependent on vehicle type.
2. Circles 2-5 turns around ignition coil, with more turns creating steadily stronger signal, fewer turns creating weaker signal.
3. The RPM circuit is suitable for most bikes, however partial bikes' signal maybe too strong, if the RPM looks like much more than actual RPM and unstable, please serial connect the attached 1M Ohm resistor to solve it

We have several speed sensors: the unit includes one of them or not speed sensor in case the model has to be connected to gear box to get speed signal.

Reed Speed Sensor and Magnet: Please refer to the above drawings.

Hall Effective Speed Sensor S3 and Magnet:

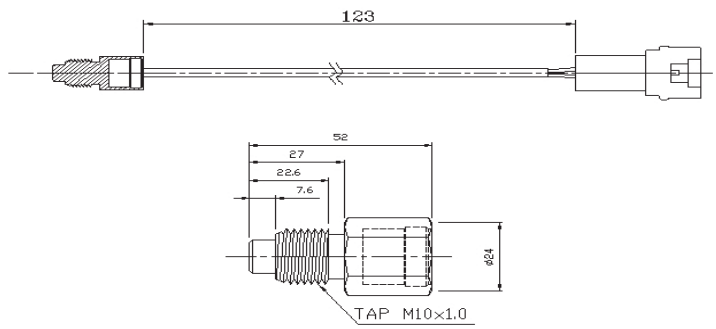
1.This is universal sensor for ATV rear wheel installation or motorcycle front wheel installation as if you purchase a relative speed sensor holder.
2.Find a part can rotate to install magnet and a location can install sensor and the sensor can be aligned to the magnet.
3.Align the center of the magnet to center of side face of the sensor.
4.Make sure the gap between the magnet and the sensor is within 5mm.

Specific Hall sensors:

The sensor such as Honda CRF, XR…etc. can replace original sensor cable and fix it at the original position.

Thermo Sensor and Sensor Tube:

1.The unit includes a water temperature sensor; you have to purchase a suitable water pipe temperature sensor tube to install the sensor easily.
2.Cut the water pipe, insert the temperature tube into the pipe and secure it by attached pipe clamps.
3.Screw the sensor into the tube.



FUNCTIONS

BAR RPM: Bar Graphic Tachometer
The bar tachometer has 8,000rpm and 16,000rpm options.

RPM: Digital Tachometer
1. It displays up to 19,900 RPM.
2. Tachometer signal picked up from either CDI or Ignition coil.

Shift Warning RPM
1. The function enables you to set up an RPM shift warning.
2. Shift warning LED indicator lights green when RPM reaches 1000-500rpm, and turns on amber when RPM reaches 500rpm in front of the setting value, then flashes red when RPM reaches setting value, and stop flash after shift gear.

MAX RPM: Maximum Tachometer
Displays highest tachometer reading achieved after last RESET operation.

SPD: Speed Meter
Displays speedometer reading up to 399.9 Km/H or 248.5 MPH.

MAX: Maximum Speed Meter
Displays highest speed achieved after last RESET operation.

AVG: Average Speed Meter
Calculates average speed from last RESET.

TRIP 1 & 2: Trip Meter 1& 2
TRIP function registers cumulative trip distance from last RESET while bike is being ridden.

ODO: Odometer
1. ODO registers cumulative distance traveled during bike moving.
2. ODO data is adjustable when it is less than 30km, after that it stored in memory and couldn't be reset.

RT: Riding Timer
1. Calculates total operation time from last RESET.
2. Count automatically begins with vehicle movement.

TT: Total Riding Timer
1. Calculates total operation time from the beginning of bike use.
2. TT data is stored in memory, even when power is off.

12/24 hour Clock
It displays 12- or 24-hour current time.

℃/℉: Digital Thermometer
1. It displays -L-℃ or -L-℉ when temperature is lower than 50℃ or 122℉ and displays -H-℃ or -H- ℉ when temperature is over 180℃ or 356℉.
2. The LCD screen will automatic change to temperature screen and flashes the digits of temperature when the thermo sensor detects temperature over the presetting warning temperature; The MODE key is out of function until the temperature cooling down and lower than the presetting waring temperature.

MAX ℃/℉: Maximum Temperature Meter
Displays highest temperature achieved after last RESET operation.

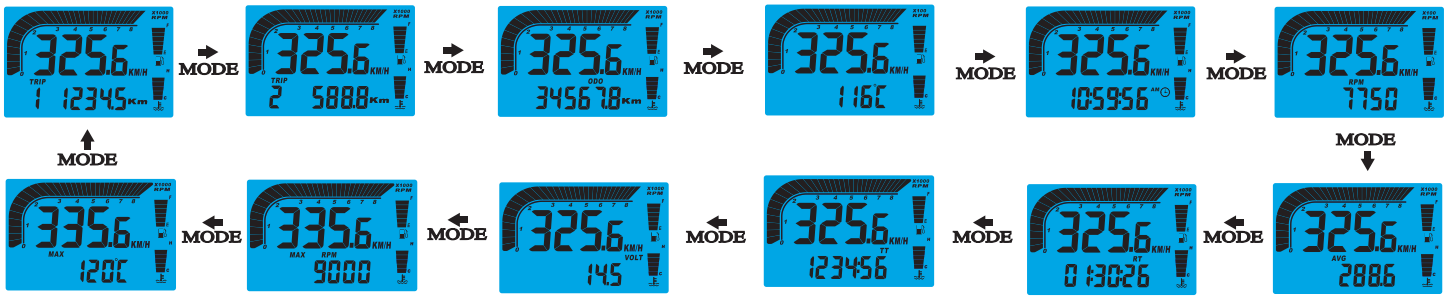
Volt: Digital Voltage Gauge
It checks bike's battery and charging system health,

: Bar Thermometer
1. It has 7 bars to indicat engine temperature and always displayed.
2. The 4th bar counts from bottom be turned when temperature reaches the preset warning temperature, each adding or decressing 15℃ lights on/off a bar based on the 4th bar.

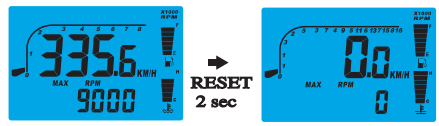
: Bar Fuel Meter
1. Have 7 bar to indicate how much fuel remains.
2. Built-in 100, 250, 500 Ohm and Off modes, the fuel bar will disappear if you select off mode.
3. Last bar flashes to indicate low fuel level automatically.

BUTTON OPERATIONS

MODE BUTTON
Press the MODE button to move all functions in loop sequence from one function screen to another.



RESET BUTTON
1. Press MODE button to the desired screen then press RESET button for 2 seconds to reset TRIP 1, Trip 2, MAX, Max. temperature and MAX RPM data from stored values to zero individually.
2. The data of Trip 1, AVG & RT be reset at the same time when one of the 3 data functions is being reset.
3. ODO, clock and TT data cannot be reset.



SHIFT RPM WARNING OPERATION
1. Press MODE button to the RPM screen; pull on the throttle until the desired shift RPM warning displayed.
2. Press RESET button to confirm and set up the shift warning RPM.
3. Bar-graphic tachometer will flash to warning you shift gear.
4. Operate items 1 & 2 to readjust the shift warning RPM.

TEMPERATURE WARNING
1. The LCD screen will jump to temperature screen automatically when the sensor detects temperature higher than the presetting warning temperature.
2. The temperature digits flashes and both buttons are out of function during over temperature.
3. Stop engine until temperature cooling down to below presetting warning temperature, both bottons recover to work.

WHEEL CIRCUMFERENCE TABLE

1. The details below have been calculated using following formula: Tire Diameter (inches) x 25.4(mm/inches) x 3.1416 = wheel circumference (in mm).
2. The computer calculates the wheel rotating length between 2 signals; you have to set the wheel circumference in case your sensor is a reed sensor or an universal hall sensor with magnet.
3. The setting value shall be changed be calculating the wheel circumference be divided by the ratio of wheel and speed cable gear, for example the wheel circumference has to be divided 5 in case 1 wheel revolution equals 5 turns of speed cable.
4. You can use more magnets, but the setting wheel circumference must be divided by the number of magnet you installed.
5. Identify the tire size of your ATV/Motorcycle when you need to change different tire size and key in the corresponding number shown in the following chart.

Tire Size	Circumference	Tire Size	Circumference	Tire Size	Circumference
15 inch	1197mm	19 inch	1516mm	23 inch	1835mm
16 inch	1277mm	20 inch	1596mm	24 inch	1915mm
17 inch	1357mm	21 inch	1676mm	25 inch	1995mm
18 inch	1436mm	22 inch	1756mm	26 inch	2075mm

CLOCK, UNIT, WHEEL, ODOMETER, TEMPERATURE & FUEL METER SETTING

1. Setup operations include 12/24hour clock, bar tachometer scale, shift warning RPM, numbers of engine rotation per signal, wheel circumference, units, odometer adjustment, units of temperature, temperature warning and fuel meter input resistance selection. These must be set up step by step. The computer will automatic reversion to main screen if no button operation for 75 seconds at any setting screen.

2. Press both MODE & RESET buttons to go into setting screen. In setting screens, press RESET button to add the flashing digit by 1 or convert units, press MODE button to confirm the digit setting and jump to next digit or next setting screen to be set. Press MODE button for 2 seconds at any setting screen to finish the setting and go to main screen.

3. It displays "12 or 24H and XX:XX-XX" symbols and AM/PM in case you select 12H. Operates buttons as descriptions of item 2 to finish clock and jump to 8,000/16,000rpm scale setting.

4. It displays 8,000rpm scale, presess RESET button to convert 8,000 or 16,000rpm. Press MODE button to confirm the setting and jump to shift RPM warning setting.

5. It displays " RPM rXXX00 ". Follow the item 2 of button operation to finish the shift RPM warning setting and jump to engine specification setting.

6. It displays "SPC-X.X RPM", the default value is 1.0; there are 4 options: 1.0, 2.0, 3.0 and 0.5. It means the numbers of engine rotation per signal. For example the value 2.0 means the engine rotate 2 turns to output a signal.

7. Press RESET button to move in loop sequence from one to another value of the 4 values. Press MODE button to confirm the setting and go to wheel circumference setting screen.

8. In "cXXXX" display, "c" means "Circumference", following 4 default digits; flashing digit is digit to be set. Follow the item 2 of button operation to finish the wheel circumference setting and jump to unit setting.

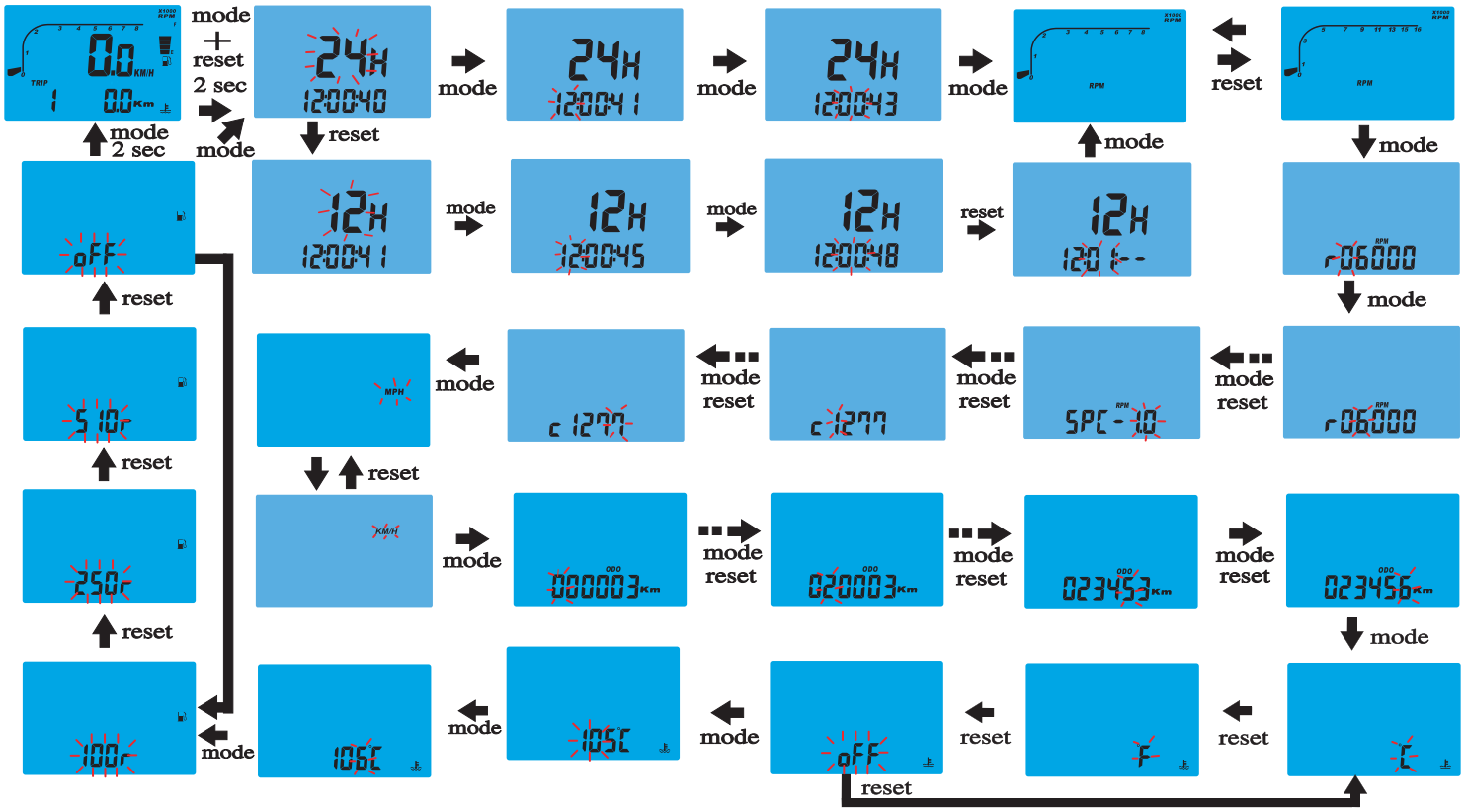
9. It displays KM/h or MPH, each press of RESET button converts unit; press MODE button to confirm unit setting and jump to odometer setting.

10. It displays "ODO & 00000Xkm", the "X" is tested odometer in factory, follow item 2 to setting a desired odometer and jump to thermometer unit setting. The setting screen will disappear when the odometer is over 30km or your setting is over 30km and returned to main screen.

11. It displaysm "℃ , ℉ or oFF", each press of RESET button converts℃ , ℉ or oFF; press MODE button to confirm temperature setting and jump to temperature warning setting.

12. It displays " XXX" and the selected unit. Follow the item 2 of button operation to finish the temperature warning setting and go to fuel sensor input resistance setting.

13. It displays "100r and fuel tank symbol", follow the item 2 to select 100, 250, 510 Ohm or oFF and return to the main screen. The fuel meter bar will disappear if you select oFF mode.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